

4-17) Unchanged.

18-19) restricted out.

20) Newly added. Claims the features of claim 1 being positioned in-line with the features of claims 8 and 9 added thereto.

Remarks

In the subject office action, the examiner's restriction requirement was deemed final. The Examiner indicated she had not considered the prior art patent submitted, claiming the information disclosure statement was insufficient. The disclosure was objected to because of an informality on page 5 of the specification. Claims 1, 3, 4 were rejected under 35 USC 102(b) as being anticipated by Robertson, U.S. Patent 4,955,997. Claims 2 and 7 were rejected under 35 USC 103(a) as being unpatentable over Robertson in view of Schlor, U.S. Patent 6,164,457. Claims 5-6 were rejected under 35 USC 103(a) as being unpatentable over Robertson in view of Wolfert, U.S. Patent 4,762,053. Claims 8-10 were rejected under 35 USC 103(a) as being unpatentable over Robertson in view of Shanks, U.S. Patent 6,328,776. Claims 11-12 were rejected under 35 USC 103(a) as being unpatentable over Robertson in view of Greenleaf, U.S. Patent 5,417,729. Claims 13, 14 and 17 were rejected under 35 USC 103(a) as being unpatentable over Robertson in view of Schlor and Shanks. Claim 15 was rejected under 35 USC 103(a) as being unpatentable over Robertson in view of Schlor and Shanks as applied to claim 13 and further in view of Greenleaf. Claim 16 was rejected under 35 USC 103(a) as being unpatentable over

Robertson in view of Schlor and Shanks as applied to claim 13 and further in view of Wolfert.

With respect to the information disclosure statement, although applicant believes it filed a complete information disclosure statement with the application as originally filed, after a phone conference with the Examiner prior to the instant Office Action, applicant resubmitted by fax a completed PTO Form 1449 to assure compliance with the requirements of 37 CFR 1.98(a)(1). Applicant respectfully requests that the Examiner consider all of the patents supplied with the information disclosure statement.

With respect to the objection of the specification on page 5, applicant encloses with this amendment an amended clean copy of the paragraph referenced on page 5 of the specification with the first line thereof having the reference numeral for the filter core changed from "15" to -25-. Reconsideration and withdrawal of the objection to the specification is respectfully requested.

The rejection of claims 1, 3-4 as being anticipated by Robertson is respectfully traversed. Applicant has amended claim 1 to include the limitations of claim 3 as originally filed which indicates that the blower means include a single inlet "backward curved centrifugal fan" as shown at 21 in Fig. 1. including a circular inlet and circular outlet for airtight mating engagement with the flexible duct means. The disclosure of Robertson simply refers to a blower 13 which has a dotted outline in Fig. 3 thereof. Applicant has specifically claimed a single inlet

backward curve centrifugal fan having a circular inlet and a circular outlet that is nowhere disclosed or found in the Robertson patent, or any other patent submitted by applicant or cited by the Examiner. Applicant submits that the Shanks et al patent discloses a blower module 12 having at least two inlets is disclosed and in col. 4, at line 18 thereof indicates that the fans may be centrifugal fans. Also, in col. 2, at line 12, it indicates that a blower may have a single inlet port and a single outlet port as part of the prior art. However, nowhere in Shanks, Robertson or any other patent discussed is there an indication that a centrifugal fan would include a backward curved blades. In the disclosure of the application, the benefits of the backward curved centrifugal fan are disclosed and applicant submits the claimed invention is unobvious. Reconsideration and withdrawal of the rejection is respectfully requested.

The rejection of claims 2 and 7 as being unpatentable over Robertson in view of Schlor is respectfully traversed. Applicant submits that while Schlor shows a rigid frame filter, Schlor discloses a zig zag type recess into which the filter element may be inserted. This differs from the language of claim 2. Applicant forcefully argues that claims 2 and 7, as depending from an allowable claim 1 should also be in condition for allowance. Reconsideration and withdrawal of the rejection with respect to claims 2 and 7 is respectfully requested.

The rejection of claims 5-6 under Robertson in view of Wolfert is respectfully traversed. Applicant submits that as with respect to amended claim 1, Robertson does not disclose a

blower means having a single inlet backward curved centrifugal fan. As such, claims 1 and claims 5 and 6 dependent thereon should be allowable over the prior art of record.

Reconsideration and withdrawal of the rejection of claims 5 and 6 is respectfully requested.

The rejection of claims 8-10 as being unpatentable over Robertson in view of Shanks is respectfully traversed. As with amended claim 1, neither Robertson nor Shanks discloses a clean air filter and delivery apparatus wherein the blower means includes a single inlet backward curved centrifugal fan including a circular inlet and circular outlet. Robertson does not disclose the shape of the inlet or outlet and Shanks et al discloses a blower module having at least two inlets as distinguished from the blower means having a single inlet backward curved centrifugal fan including a circular inlet and a circular outlet. Further, the filter modules of Shank are in separate loops from the blower module and are not located upstream or downstream therefrom as claimed by applicant. Reconsideration and withdrawal of the rejection in light of the above is respectfully requested.

The rejection of claims 11 and 12 as being unpatentable over Robertson in view of Greenleaf is respectfully traversed. The filter shown in Greanleaf and built and configured to mount on a dolly or cart 70 which is uniquely constructed to maintain the structures in airtight sealed arrangement (col. 6, lines 52-55). Applicant submits that if the cart is needed to maintain the filters in an airtight relationship, those filters will not be

combinable with Robertson without the cart. While patents may be combined by the Patent Office, they may not be combined in ways that teach away from what is disclosed in those patents. As such, it is submitted that the claims 11 and 12, specifically as they depend from amended claim 1, define a structure which is patentable over any proper combination of Robertson and Greenleaf. Reconsideration and withdrawal of the rejection of claims 13, 14 and 17 is respectfully requested.

The rejections of claims 13, 14 and 17 as being unpatentable over Robertson in view of Schlor and Shanks is respectfully traversed. Applicant submits that claim 13 as originally written to include a single inlet backward curved centrifugal fan having a circular inlet and a circular outlet, and also specifically claimed to include a flexible ductwork positioned in airtight relation between the air return circular outlet and the circular inlet of the centrifugal fan and also to include a flexible duct work positioned in airtight relation between the centrifugal fan outlet and the air deliver supply inlet defines a clean air filter and delivery apparatus that is patentably distinct from Robertson, Schlor, Shanks and any proper combination of same. Shanks discloses filter module loops 14a-14b connected to the multiple inlet blower module, unlike the in-line orientation claimed by applicant. Applicant submits that claim 13 as originally filed patentably defines over the references, and also claim 14 which is dependent therefrom. Claim 17 also has an element including a single inlet backward curved centrifugal fan including a circular inlet and a circular outlet. Claim 17 also

specifically claims a rigid spiral duct work positioned in airtight relation between the air return circular outlet and the circular inlet of the centrifugal fan, and a flexible duct work positioned in airtight relation between the centrifugal fan outlet and the air delivery supply circular inlet unlike Shank that discloses a filter module loop. Applicant submits that neither Robertson nor Schlor nor Shanks, nor any of the other references taken individually or in combination disclose such a specific claimed structure as recited by applicant in independent claim 17. Reconsideration and withdrawal of the rejection is respectfully requested.

The rejection of claim 15 as being unpatentable over Robertson in view of Schlor and Shanks as applied to claim 13 above and further in view of Greenleaf is respectfully traversed. As with the above rejection to claims 11 and 12, applicant submits that Greenleaf discloses a filter system that teaches being mounted on a cart or dolly 70 in a specific manner in order to provide an airtight relation between the filter elements and that without that dolly or cart, the Greenleaf reference, even when combined with Robertson, Schlor and Shanks, does not disclose applicant's invention, which is recited as being for mounting on a plurality of grid openings of a suspended ceiling of an enclosed business area independent of any heating, ventilating and air conditioning apparatus therein. For all the above reasons, applicant submits that claim 15 is unobvious, specifically in that claim 13 from which it depends recites a backward curved centrifugal fan not found in the prior art or in

any combination thereof. Reconsideration and withdrawal of the rejection of claim 15 is respectfully requested.

The rejection of claim 16 as being unpatentable over Robertson in view of Schlor and Shanks as applied to claim 13 and further in view of Wolfert is respectfully traversed. Applicant submits that claim 16 recites a mesh grill shaped to mount on the grid of a suspended ceiling for intake of prefiltered air therethrough. Applicant submits that Wolfert does not disclose a filter which is mounted on a grid of a suspended ceiling. While Robertson may disclose something similar, applicant submits that neither the combination of Robertson or Wolfert or the other patents therein disclose or recite the use of a backward curved centrifugal fan. As such, being depending from claim 13, applicant submits that claim 16 is in condition for allowance.

Applicant has newly added claim 20 to recite the invention of original claim 1 wherein the features thereof are positioned in-line, and adding the limitations of claims 8 and 9 thereto. Applicant recites the positioning of the blower means as remote from the filter means unlike Robertson and having the air return means, filter means, blower means and supply means being positioned in-line unlike the Shanks reference that discloses filter module loops 14a-14b. Further, applicant has positioned flexible duct work between the filter means and the blower means and between the blower means and air supply means to claim the remote in-line positioning of the blower means, unlike Robertson, Shanks or any of the other references, singly or in combination. Applicant submits that claim 20 is in condition for allowance.

Since independent claim 18 has been restricted out, no new fees are required. The basis for the claim is found in original claims 1, 8 and 9 and at least in the drawings 5-10. The allowance of claim 20 is respectfully requested.

Applicant has reviewed the references made of record and not relied upon and finds nothing therein that would negate the patentability of applicant's invention as claimed in claims 1-17.

With this amendment, it is believed that all grounds for objection and rejection have been overcome and that the application is in condition for allowance. Such action is courteously solicited.

Respectfully submitted,

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I hereby certify that this paper (along with any referred to as being attached or enclosed) is being deposited with the United States Postal Service as First Class Mail with sufficient postage in an envelope addressed to: Commissioner of Patents and Trademarks, Washington DC 20231, on January 17, 2003.

James N. Videbeck
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Appendix

Referring to Fig. 2, a mini-pleat particle filter core or cartridge, generally indicated at 25, and sold under the trademark V-BANK, by Filtration Group of Joliet, Illinois, includes a frame defined by end panels 26-26 (one shown) and connecting frame posts 27-27. These filters are offered in two sizes, 24" x 24" x 12" and 12" x 24" x 12". The frame posts are typically 1" x 11" x 12" the importance of which will be discussed in further detail below. The filtering media 28 is wound from one of the frame posts 27 through the ends of the various fingers 26a, 26b, 26c, 26d respectively, between end panels 26-26 in a V-shape or a pleat type arrangement and may also be layered with an outside portion and one or more inside media portions to increase the square footage of filtering media that may be enclosed in a single mini-pleat filter cartridge 25. In operation, a single filter cartridge sized 2 feet by 2 feet by 1 foot may include up to 193 square feet of filtering media, and a cartridge sized 1 foot by 2 feet by 1 foot may include up to 97 square feet of filtering media. The extended media surface provides a very low resistance to air flow. A low pressure drop of air running through the filter cartridge results in lower energy costs and longer filter life. A minimum standard for such an air cleaning system would be 95% ASHRAE or better. The rigid frame and stable mini-pleat filter cartridge design not only distributes air substantially completely across the filter but also allows for a large variation in air flow and pressure drop

without affecting the filter performance and efficiency. The performance is also not affected by repeated fan shut downs or changes in air flow velocities. Such a filter is rated at continuous air flow rates of up to 3,000 cubic feet per minute.